Role of ASM in Graduate Education

March 23, 2017
Board on Higher Education and Workforce
The National Academies of Sciences, Engineering, and Medicine
Washington, DC

Amy L. Chang
Education Director, American Society for Microbiology
ASM Graduate Opportunities

Professional Skills Development

Research Fellowships

Mentoring and Networking

Career Opportunities

Communities of Practice
Findings: ASM Diversity Fellowship (2016)

**Fellow**
- Name recognition & prestige *over financial support*
- Access to and *acceptance by community’s best*
- *Empowered*: control of ones’ finances
- Access to *professional development & “insiders”*

**Mentor**
- Limited personal benefit beyond contributing to the profession

**Reflection**
URMs & First Generation seek:
- Clarify scientific profession
- Science self-efficacy
- Sense of belonging to a community
Findings: Professional Development

• Topics: Communications and education

• Lessons Learned:
  • Value to improve one’s work or project
  • Connection to experts and insiders
  • Competitive advantage for careers
  • ASM brand and recognition

• Reflections and Next Steps:
  • More inclusive
  • Formal recognition
3R\textsuperscript{1} Graduate Curriculum

- \textbf{R}igor
- \textbf{R}eproducibility
- \textbf{R}esponsibility

\textsuperscript{1} Casadevall @ JHU Dept of MMI
New Graduate Curriculum

• **Philosophy**
  • Epistemology
  • Logic
  • Ethics

• **Mathematics and computer science**
  • Probability
  • Statistics
  • Computer science (data management)
  • Computer science (coding and visualization)

• **Education and social sciences**
  • Teaching and mentoring
  • Communications
  • Cultural understanding and inclusivity